CLAIMS

1. A multiple frequency band receiver for selecting a multiple frequency band RF signal and having reduced number of components in a RF front end system comprising:

   an amplifier for each frequency band with output connected to input of an filter for each frequency band, the output of said filters connected to input of a buffer stage for each frequency band, and the output of each said buffer stage connected together, a mechanism to power down the buffer stages in order to select a frequency band; wherein the said filters can be any filter types including all pass.

2. The receiver of claim 1 wherein the receiver architecture is a superheterodyne, a low-intermediate frequency, a direct conversion, or a quasi-direct conversion type.

3. The receiver of claim 1 wherein the output of said buffer stages is connected to the input of a mixer.

4. The receiver of claim 1 further comprising a low noise amplifier LNA for each frequency band and each of the non-selected frequency bands which can be powered down to improve isolation of the non-selected frequency bands.

5. The receiver of claim 1 wherein the buffer stages comprise of emitter follower circuits.

6. The receiver of claim 1 wherein the buffer stages comprise of source follower circuits.
7. The receiver of claim 1 wherein the buffer stages comprise of any known amplifier topology including a low noise amplifier with power down capability.
8. The receiver of claim 1 wherein the number of selectable frequency bands is an integer N, where N>1.
9. The receiver of claim 1 wherein the said filters are external components to the RF chip.
10. The receiver of claim 1 wherein the said filters are integrated resonant elements on the RF chip.
11. The receiver of claim 1 wherein the receiver is implemented with CMOS, bipolar, BiCMOS, or SiGe technologies.
12. A method of receiving multiple frequency bands by selecting a multiple frequency band RF signal and of reducing the number of components in a RF front end system comprising:

amplifying a multiple frequency band RF signal for each frequency band,

filtering said amplified multiple frequency band RF signal for each frequency band by any types of filters including all pass.

buffering said filtered multiple frequency band RF signal for each frequency band by buffer stages with outputs connected together,

powering down buffer stages to select a frequency band.

13. The method of claim 13 wherein the method of receiving is a superheterodyne, a low-intermediate frequency, a direct conversion or a quasi-direct conversion type.
14. The method of claim 13 wherein the buffered and band selected RF signal is mixed by a mixer.
15. The method of claim 13 wherein the multiple frequency band RF signal is further amplified by a low noise amplifier LNA for each frequency band and the non-selected frequency band can be powered down to improve isolation of the non-selected frequency band.
16. The method of claim 13 wherein the buffer stages comprise of emitter follower or source follower circuits.
17. The method of claim 13 wherein the buffer stages comprise of a low noise amplifier with power down capability.
18. The method of claim 13 wherein the buffer stages comprise of any known amplifier topology including a low noise amplifier with power down capability.
19. The method of claim 13 wherein the number of selectable frequency bands is an integer N, where N>1.